

Instructor:

Yaniv Plan, MATX 1219, yaniv@math.ubc.ca

Office hours:

Tuesday 14:00-15:00, Wednesday 16:00-17:00, MATX 1219.

Course website: <http://www.yanivplan.com/math-302>

Prerequisites: One of MATH 200, MATH 217, MATH 226, MATH 253, MATH 263.

Text: We follow the book “Introduction to Probability” by Anderson, Seppäläinen, and Valkó. Other references of interest are R.L. Scheaffer, “Introduction to Probability and its Applications”, and S.M. Ross, “A First Course in Probability”.

Outline: The course will include the following topics:

1. sample spaces, events, axioms of probability
2. counting principles, permutations and combinations
3. independence and conditional probability, Bayes formula
4. discrete random variables, expectation and variance
5. continuous random variables, expectation and variance
6. joint distribution and conditional distribution
7. transformation of random variables
8. covariance and correlation
9. moment generating function
10. Chebycheff inequality
11. law of large numbers and central limit theorem

Evaluation: There will be homework assignments, a midterm exam, and a final exam.

Homework: The single lowest assignment grade will be ignored. Assignments are due at the beginning of class on Thursdays. No late assignments will be accepted.

Midterm exams: There will be a 110-minute midterm exam in class on: **Thursday, May 30**. Missing a test normally results in a mark of zero. Exceptions may be granted in two cases: prior consent of the instructor or a medical emergency. In the latter case, the instructor must be notified within two working days of the missed test, and presented with a doctor’s note immediately upon the student’s return to UBC. When an exception is granted for a missed test, there is no make-up test, and the final exam mark will be used.

Final exam: There will be a final examination during the examination period.

Final mark: The final mark will be calculated as follows:

- Homework: 10%
- Midterm: 40%
- Final exam: 50%